

FIG. 1A

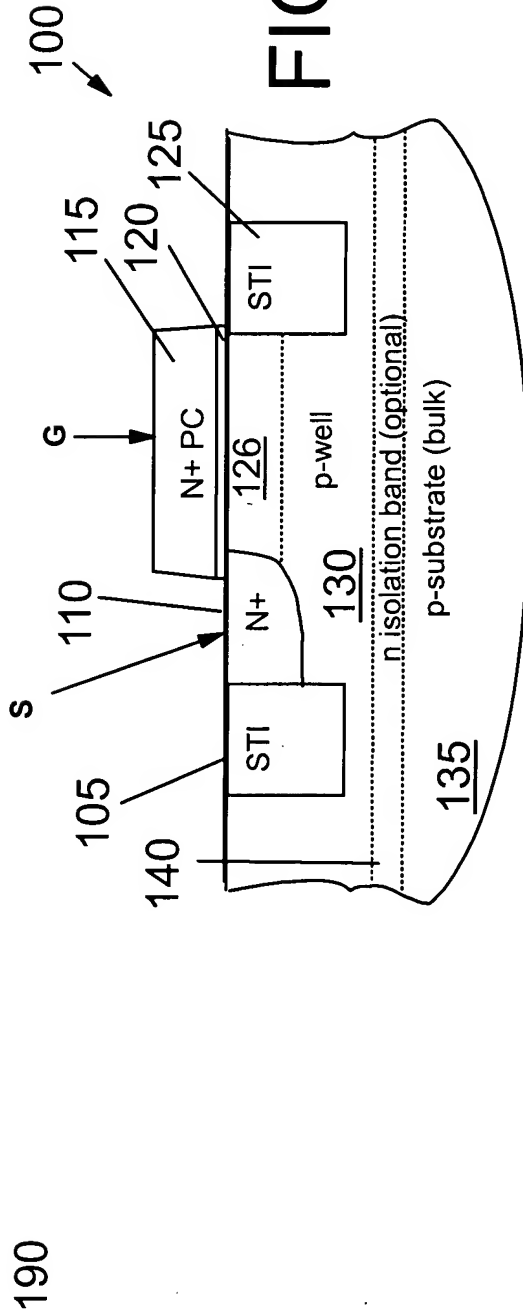


FIG. 1B

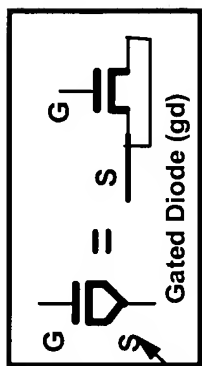


FIG. 2B

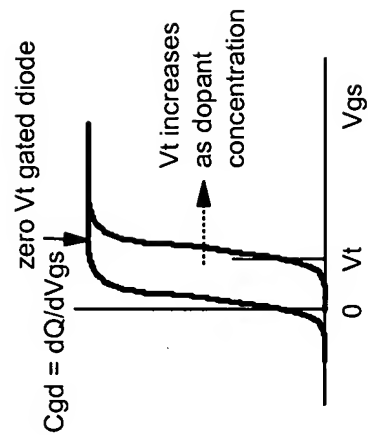


FIG. 3A

Gated Diode Capacitance vs Gate-to-Source Voltage (V_{gs})
 Each curve represents a different gated diode gate size.
 threshold voltage = 0.2 V

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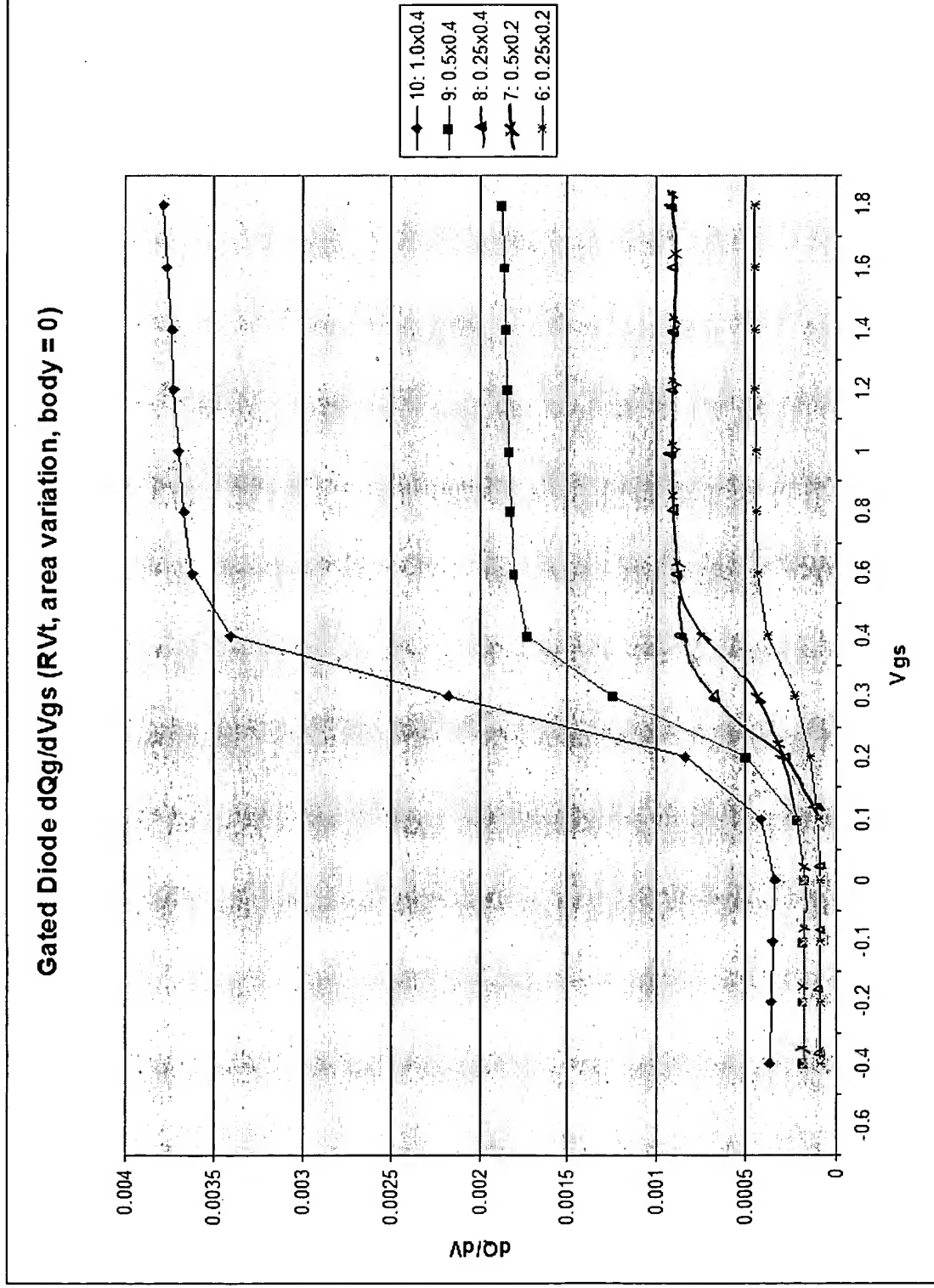
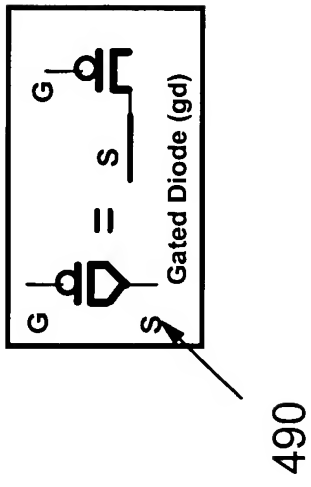
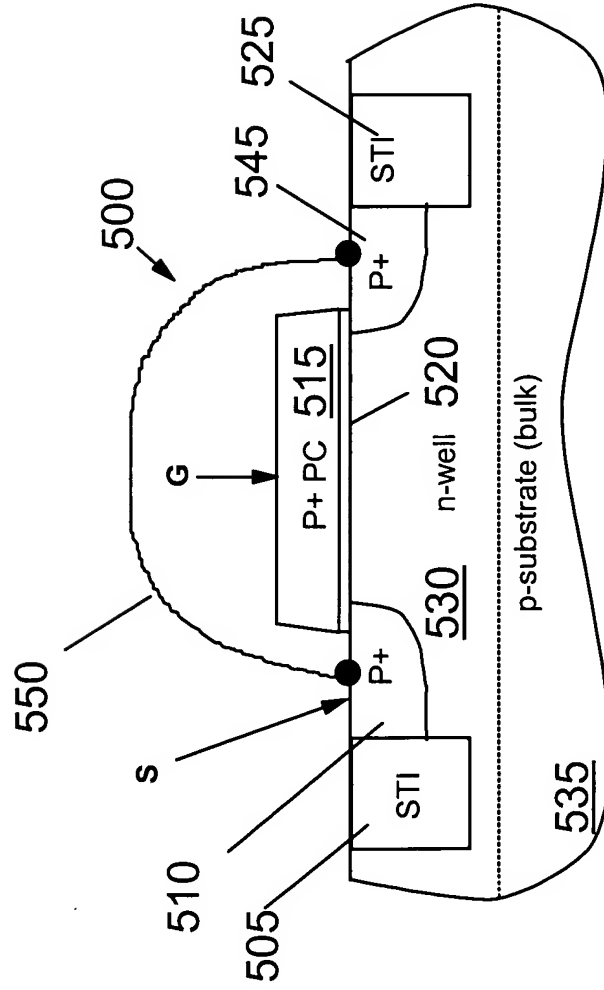
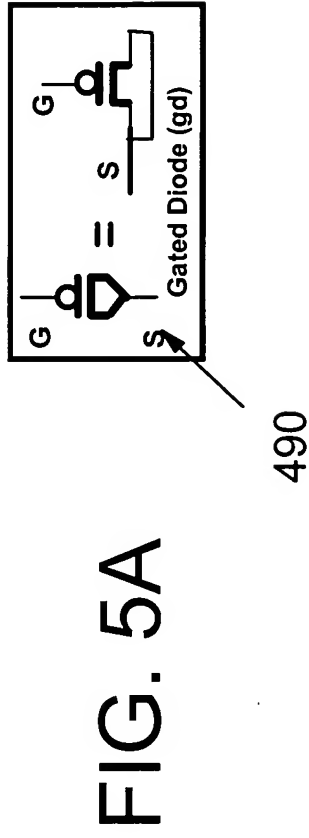


FIG. 3B

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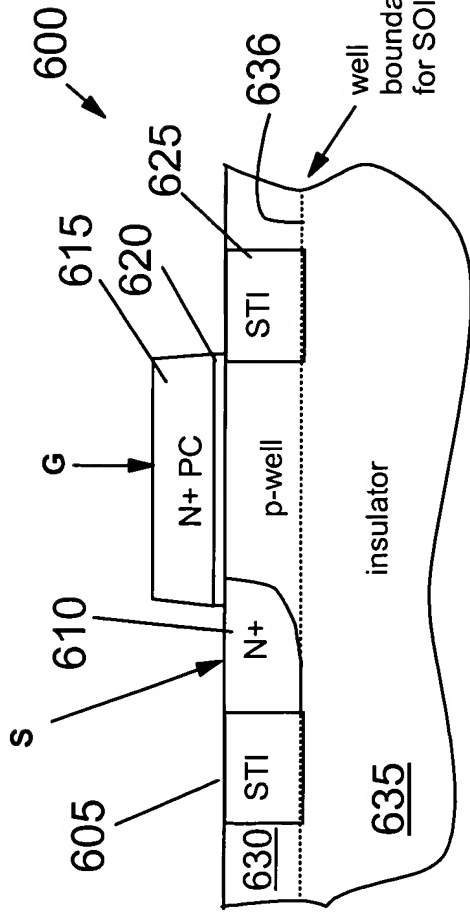


FIG. 6

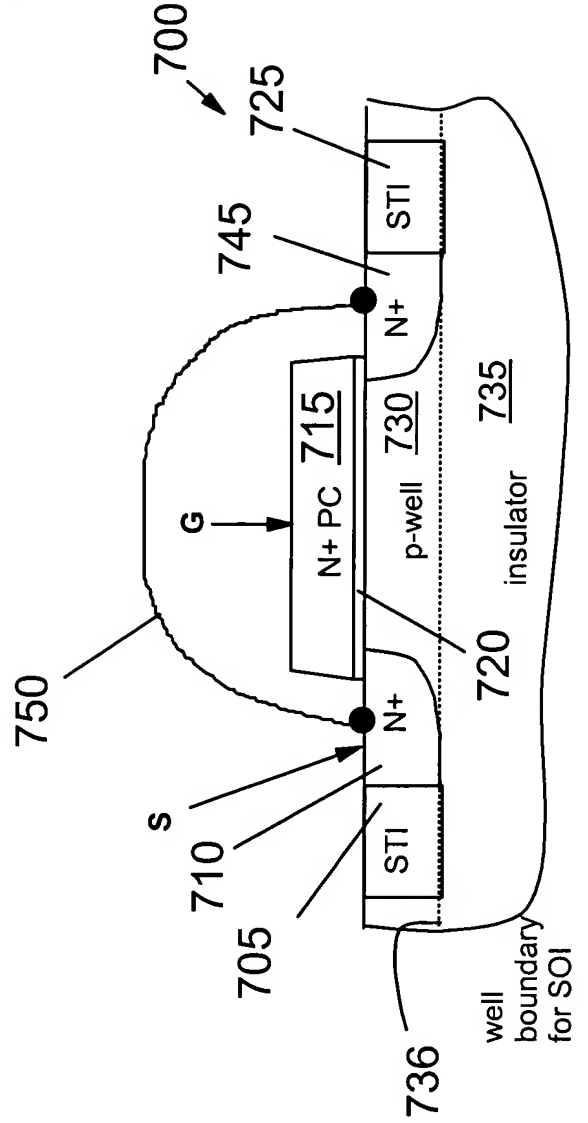


FIG. 7

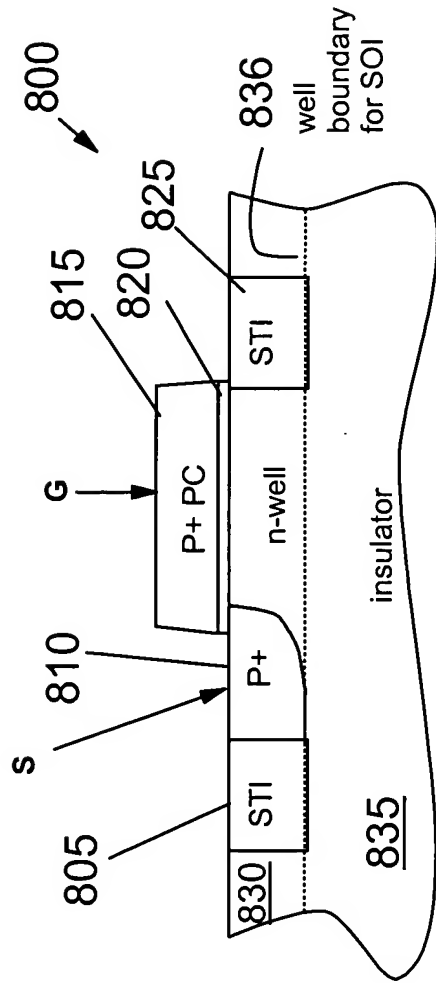


FIG. 8

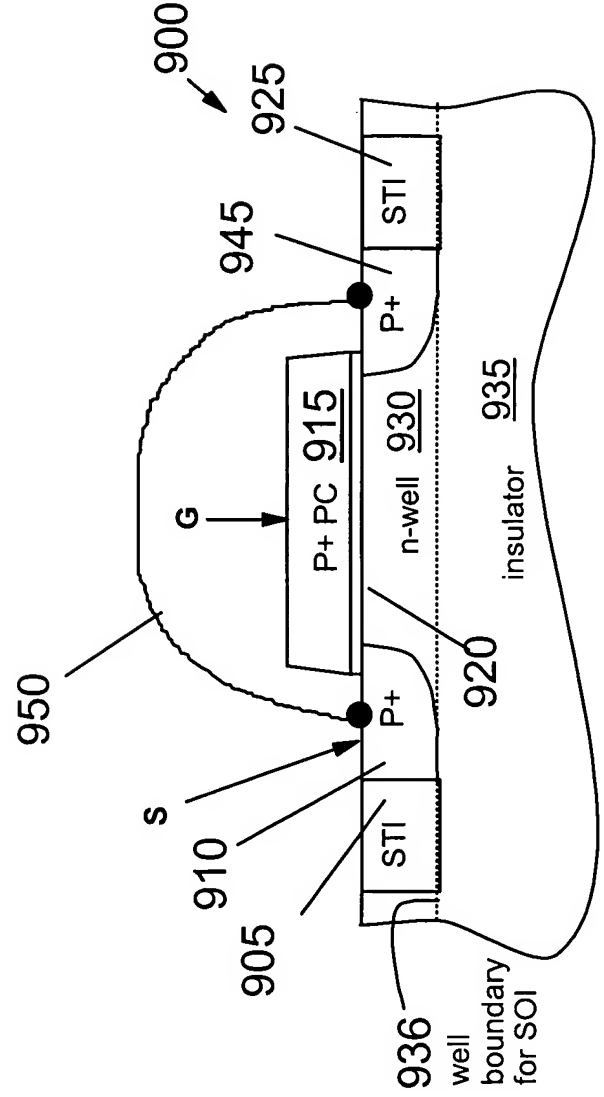


FIG. 9

FIG. 10

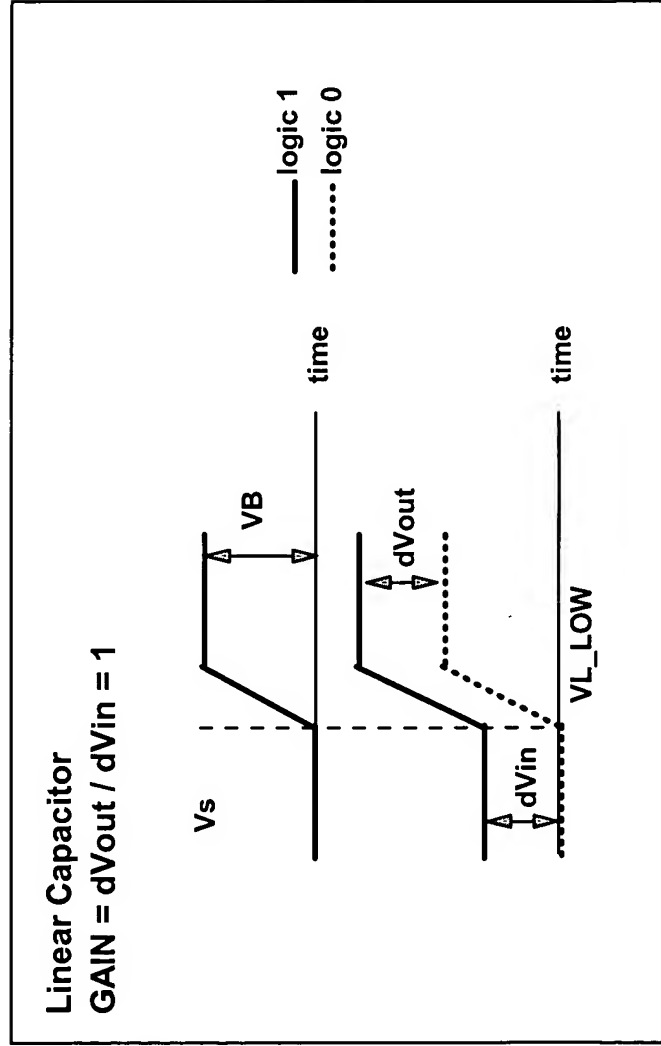


FIG. 11A

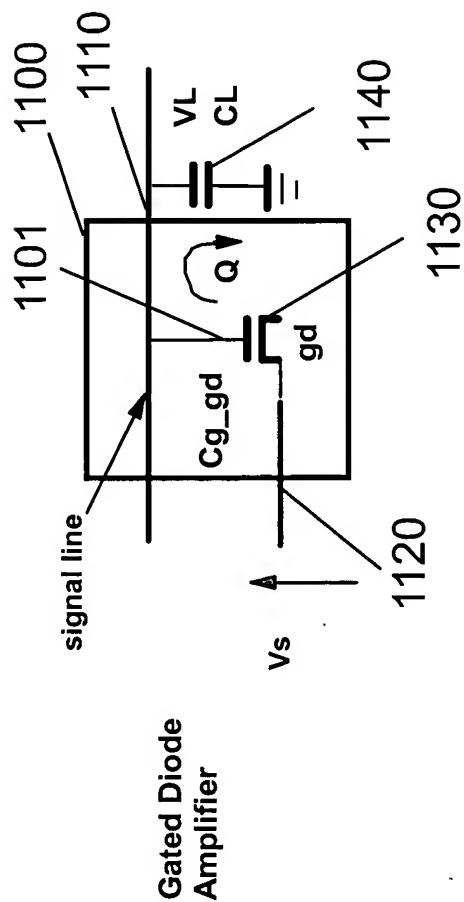


FIG. 11B

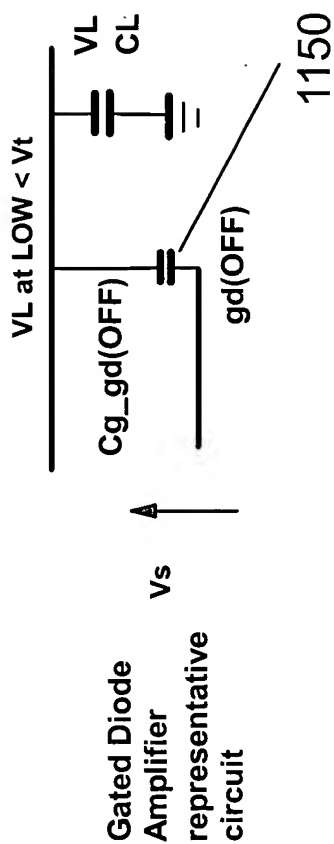


FIG. 11C

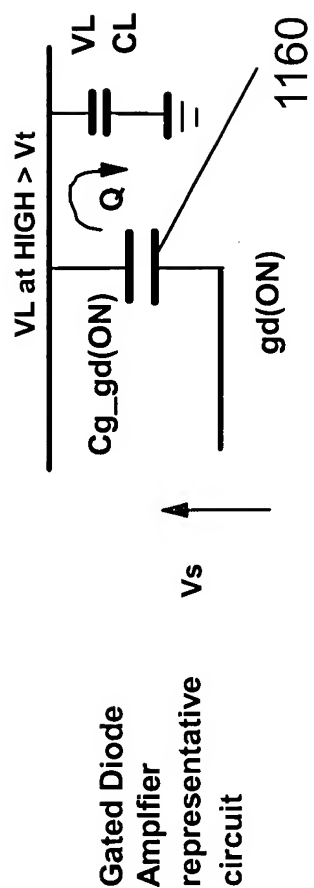
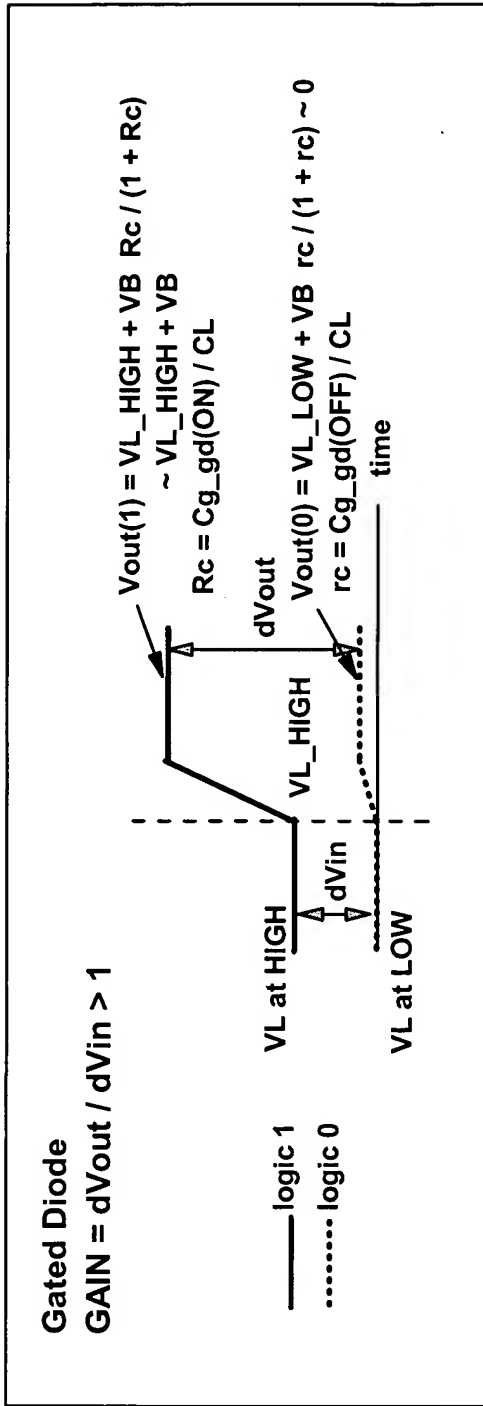
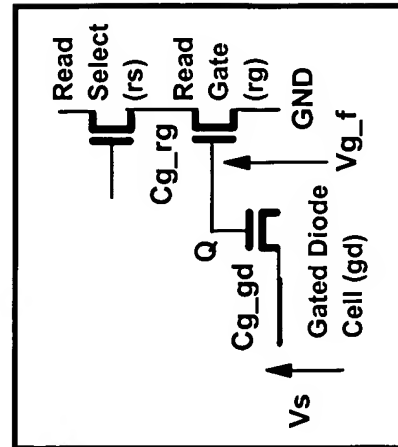


FIG. 12A

FIG. 12B



$$R_c = C_{g_gd} / C_{g_rg}$$

$$\text{Gain} = V_{g_f} / V_{g_i}$$

$$\text{Gain} = 1 + R_c - (V_{t_gd} / V_{g_i}) R_c \sim 1 + R_c$$

$$\text{Gain} = (1 + V_s / V_{g_i}) R_c / (1 + R_c)$$

$$V_{g_i} = 0.4 \text{ V}, V_{t_gd} = 0$$

C_{g_gd} / C_{g_rg}	0.01	0.1	1	2	5	10	100	
$1 + R_c$	1.01	1.1	2	3	6	11	101	
$R_c / (1 + R_c)$	0.01	0.09	0.5	0.67	0.83	0.91	0.99	
$(1 + V_s / V_{g_i}) R_c / (1 + R_c)$	0.035	0.32	1.75	2.35	2.91	3.19	3.47	$V_s / V_{g_i} = 2.5$
$(1 + V_s / V_{g_i}) R_c / (1 + R_c)$	0.04	0.36	2.00	2.68	3.32	3.64	3.96	$V_s / V_{g_i} = 3$
Gain	1.01	1.1	2	2.68	3.32	3.64	3.96	$V_s / V_{g_i} = 3$
Charge Transfer	<---	complete	---	<---	constrained	---	>-->	

FIG. 12C

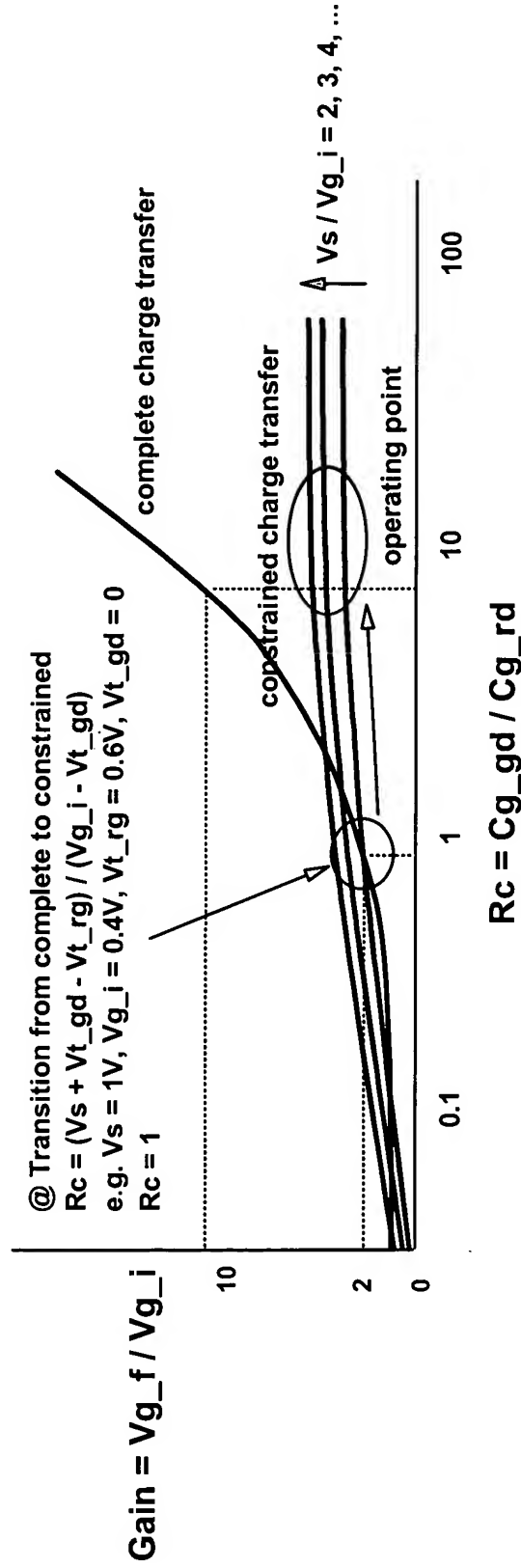


FIG. 12D

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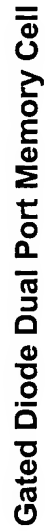


FIG. 13

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FIG. 14

[illegible]

FIG. 15

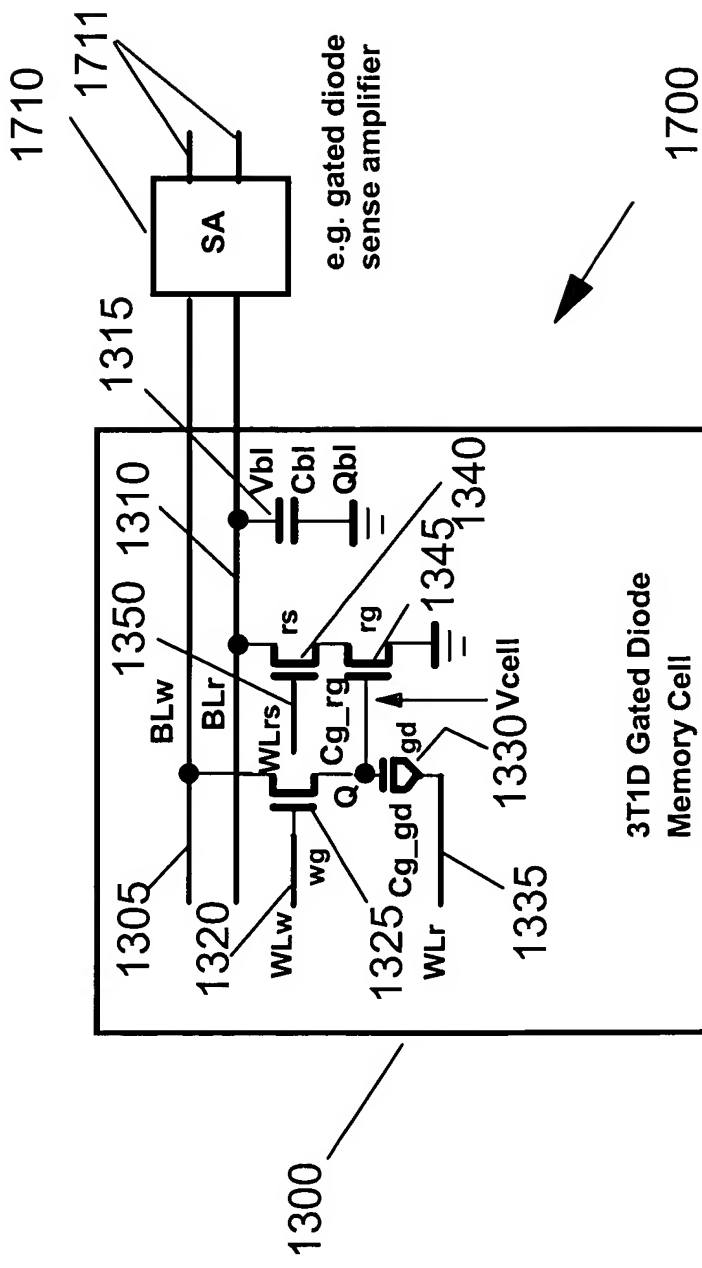
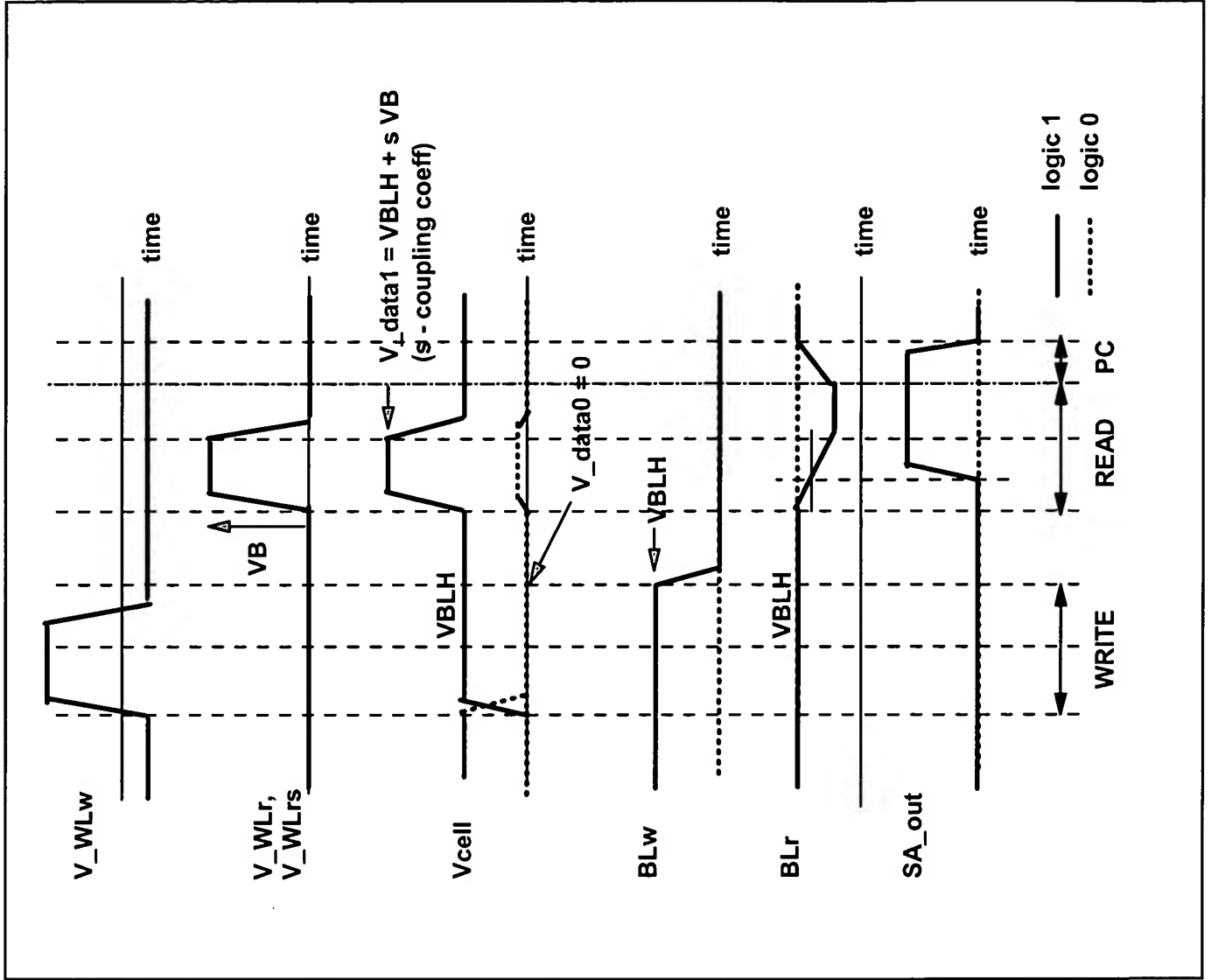


FIG. 16

FIG. 17



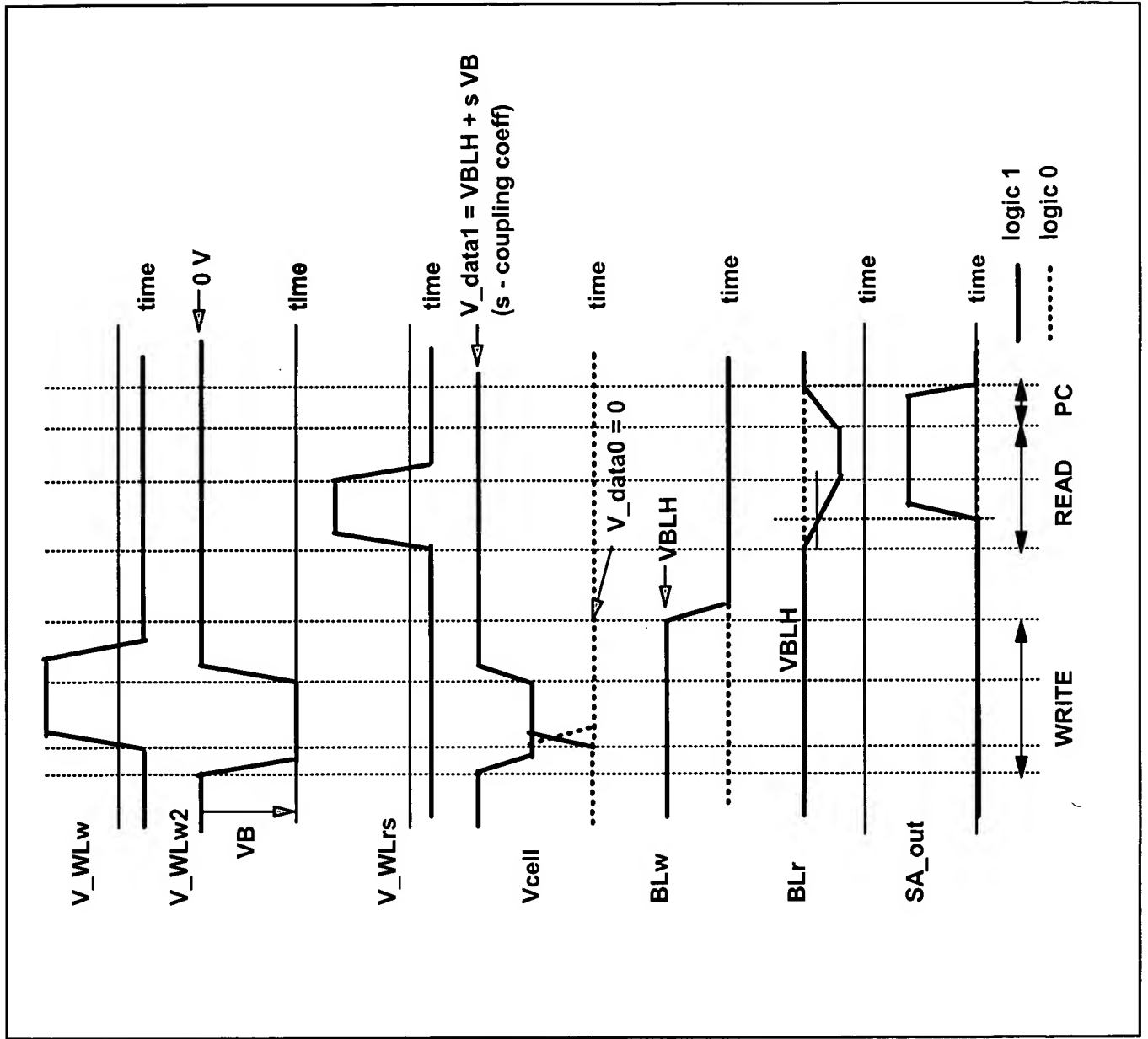
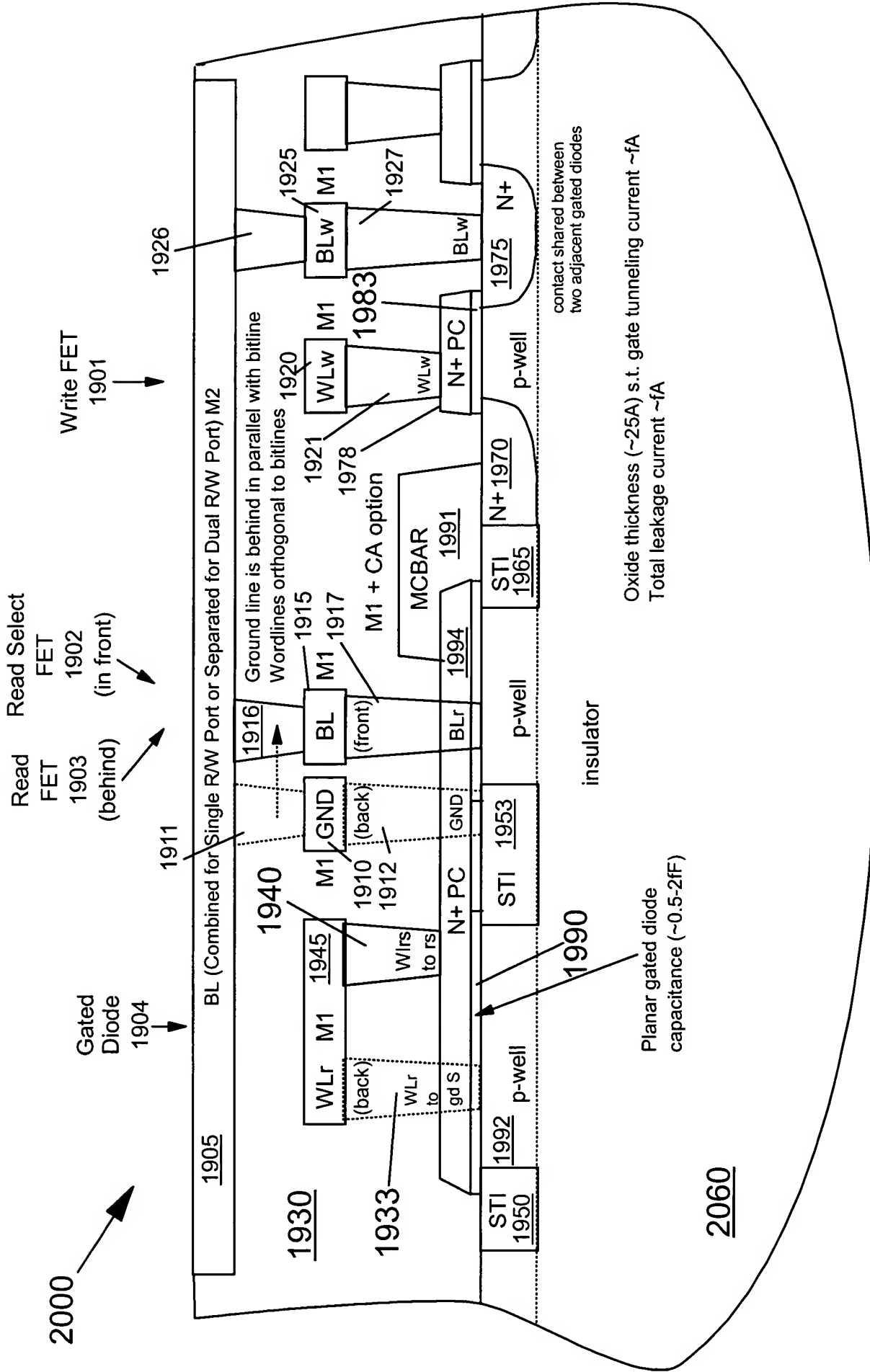


FIG. 18



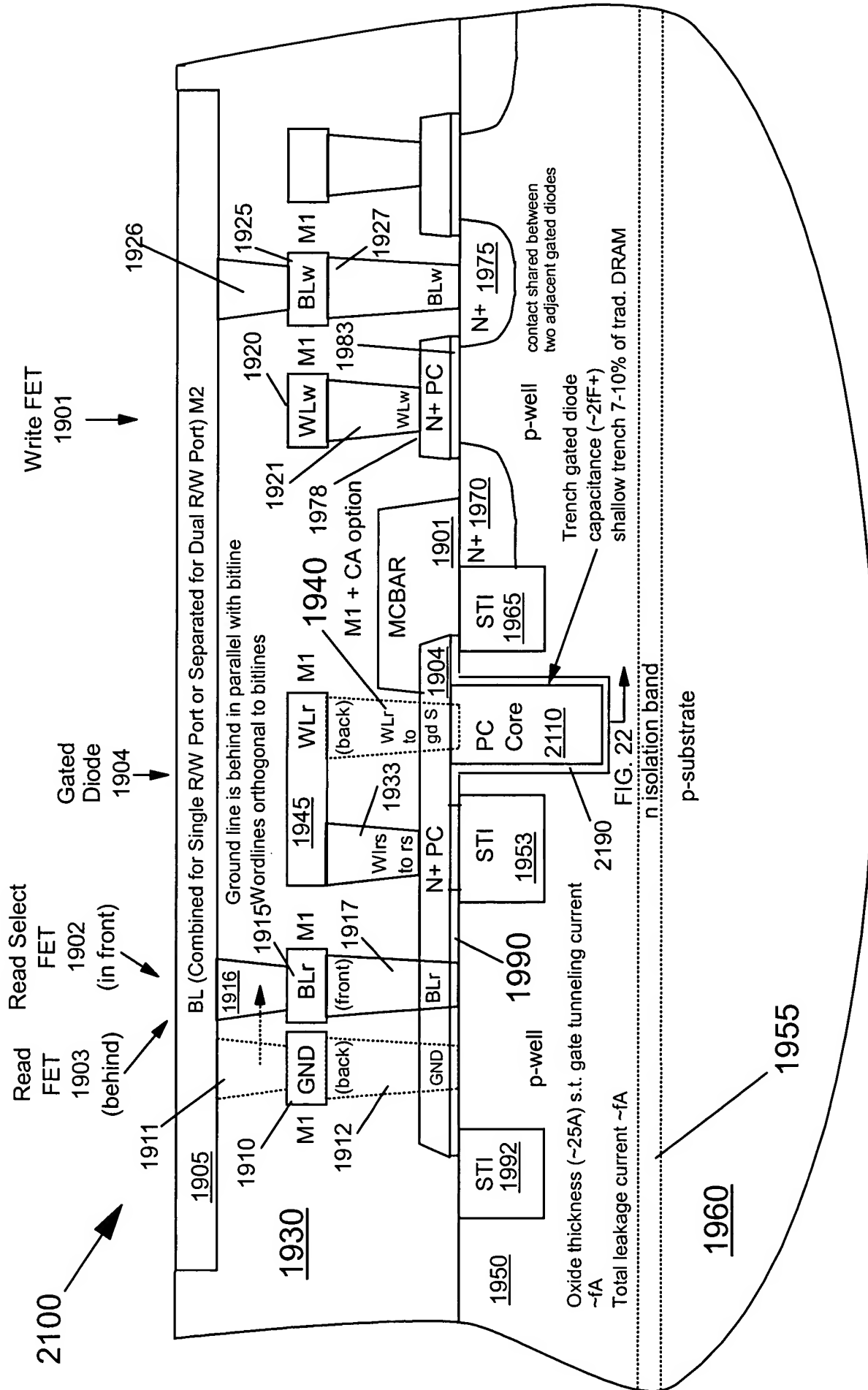


FIG. 21

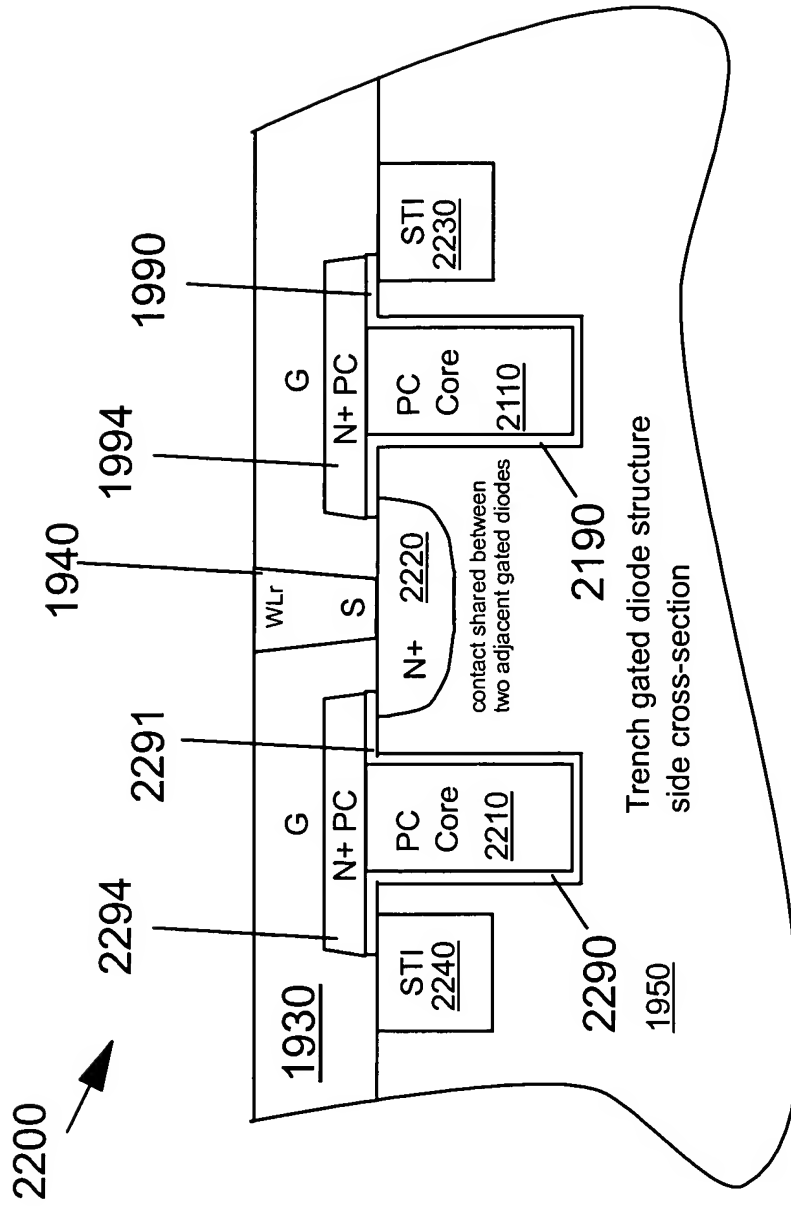


FIG. 22

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FIG. 23

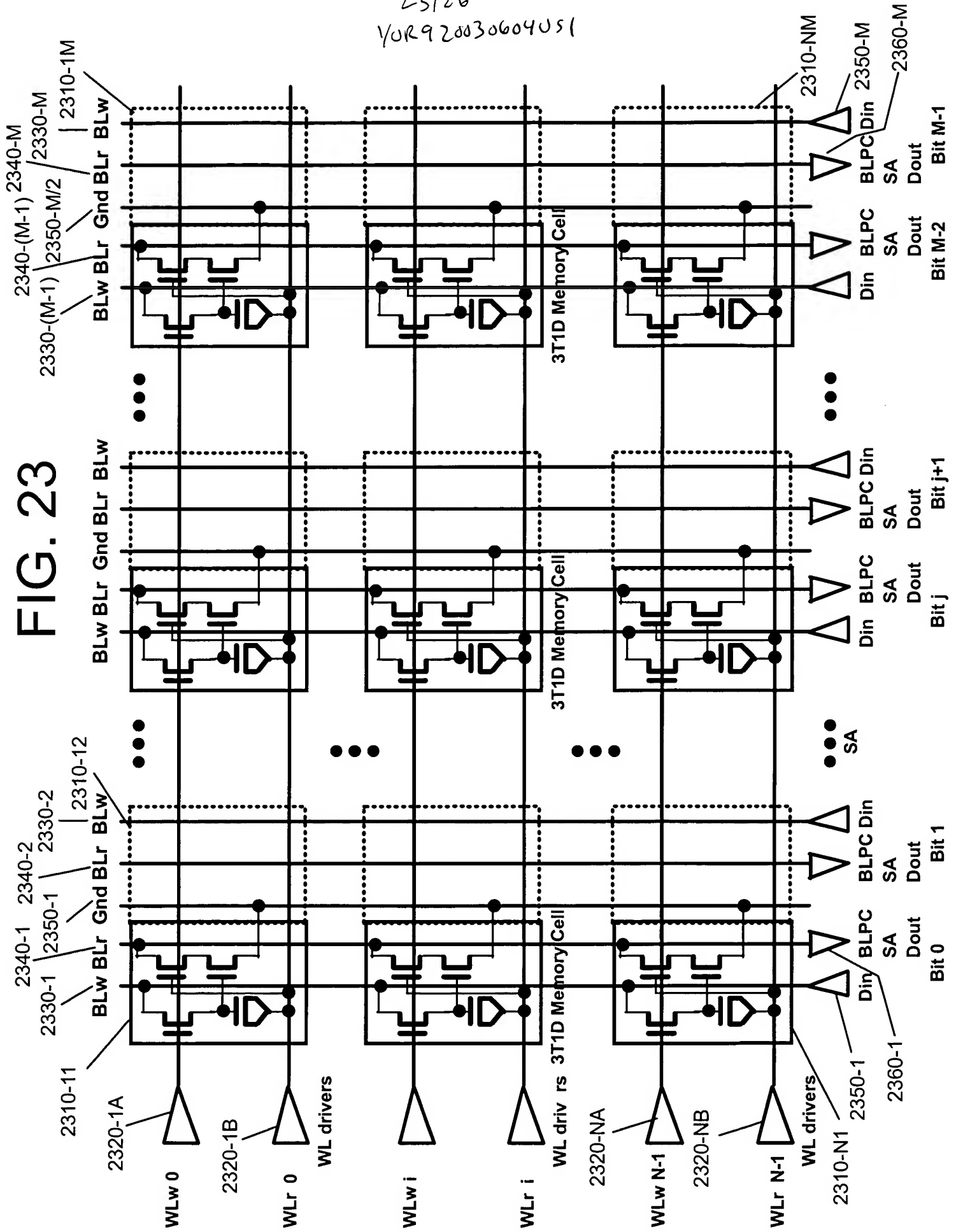


FIG. 24

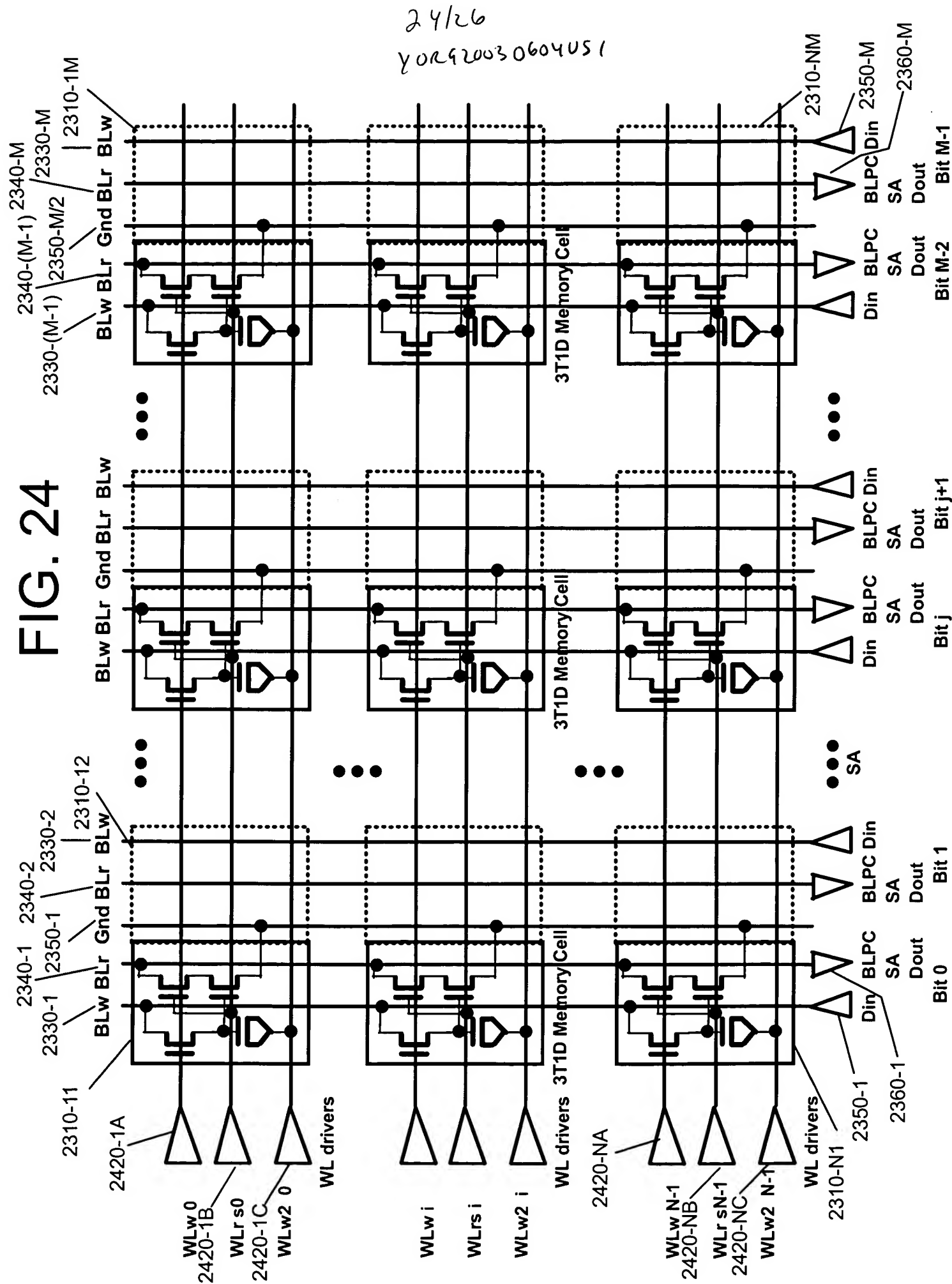
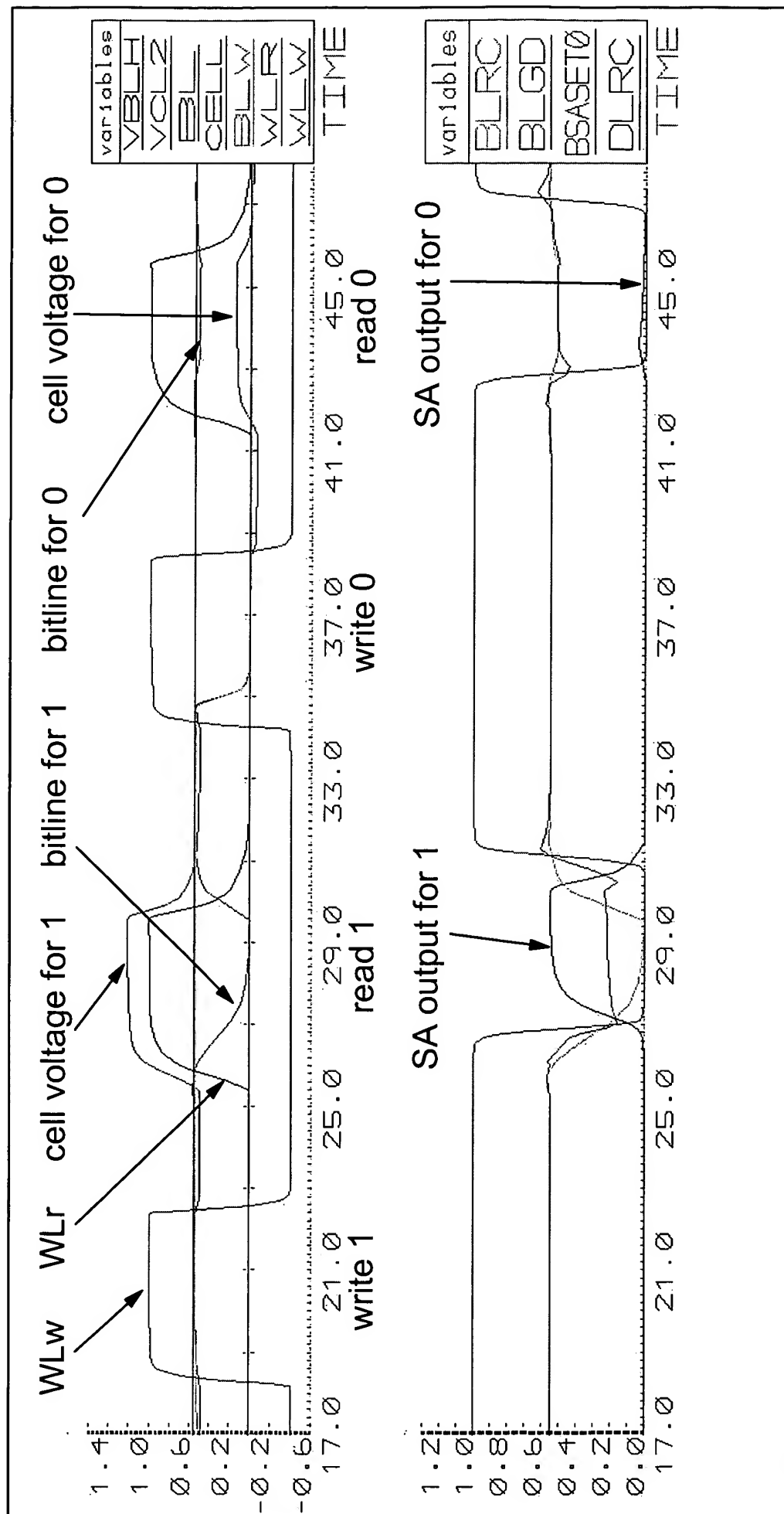


FIG. 26



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